

Process

- According to the current continuous improvement plan (CIP), we should start having the group chairs present summaries of how well students have been meeting the educational objectives in each of their specialties. That would include summaries of the ABET outcome assessments that were made, compliance in completing those, enrollment in the various capstones, and identification of any problems or deficiencies that are emerging from the switch to remote instruction over the past year.
- https://vannevar.ece.uw.edu/cgi-bin/operations/advising/course_db/eoq_main.pl

ABET Review: Embedded Spring 2022

Course Offerings & Enrollments

Class	Title	Spr'20	Su'20	Au'20	Wi'21	Spr'21	Su'21	Au'21	Wi'22
271	Intro Digital Logic	37	30	46	78	69	10	60	75
371	Adv. Digital Logic	68		60	66	70		69	55
469	Comp Arch 1			89	61			86	86
470	Comp Arch 2	34				23			
474	Embedded	54	35	64	54	60	40	63	73
475	Embedded Capstone	35		11	42	36		26	30

ECE & CSE enrollment numbers.

LOTS of students, so LOTS of offerings – most classes 3-4 times a year.

2021-22: Moving to 3 offerings of 469 a year.

ABET End of Course compliance – missing reports

- **Spring 2020**

- **Autumn 2020**

- EE 475 (Bruce Hemingway)

- **Winter 2021**

- **Spring 2021**

- EE 470 (Mark Oskin)

- **Autumn 2021**

- EE 271 (Sep Makhsous)

- **Winter 2022**

- EE 474 (Blake Hannaford)

ABET outcomes

Novice/Developing/Competent/Exemplary

Course	Offering	Faculty	Q1	Q2	Q3	Q4	Q5	Q6	Q7
469	Au'20	Scott H.	1/0/5/3	1/0/2/6				0/0/5/4	
	Au'21	Scott H.	0/2/7/3	0/3/0/9				0/2/6/4	
474	Spr'20	Rania	0/0/0/6	0/0/0/6				0/0/0/6	
	Au'20	Rania	0/0/2/4	0/0/2/4				0/0/2/4	
	Win'21	Jen	0/2/2/2	0/2/2/2				0/2/2/2	
	Spr'21	Blake	0/0/2/4	0/1/4/1				1/2/2/1	
	Au'21	Rania		0/1/2/6					
	Win'22	Blake							
475	Spr'20	Rania				0/0/0/6	0/0/0/6		0/0/0/6
	Win'21	Rania				0/0/5/5	0/0/5/5		0/0/5/5
	Spr'21	Rania				0/0/0/6	0/0/0/6		0/0/0/6
	Aut'21	Shwetak				1/1/3/0	0/0/4/2		0/0/2/4
	Win'22	Rania				0/0/0/6	0/0/0/6		0/0/0/6

1: Solve Problems. 2: Apply Design Considering Constraints. 3: Communication.

4: Ethics. 5: Teams. 6: Experiment & Analyze Data. 7: Learning

Engineering Standards

- Last ABET visit we got dinged on the use of engineering standards:

The only practical way to assess the use of engineering standards is through design project reports. ... examine a sampling of the submitted EOC reports from the capstone design classes and see if those reports show the use or consideration of engineering standards. ... The point of adding this to the annual group reviews would be to provide additional documentation that we do look at it and consider it important, as does ABET.

Part of the reason engineering standards often gets left out is that it is not part of the 1-7 student outcomes (ABET criterion 3). It instead appears under curriculum (ABET criterion 5) as part of the major design experience:

(d) a culminating major engineering design experience that 1) incorporates appropriate engineering standards and multiple constraints, and 2) is based on the knowledge and skills acquired in earlier course work.

Engineering Standards (cont.)

- Rania's 475 Spr'20: Constraints are an explicit part of the report, with multiple standards identified and discussed.
- Rania's 475 Wi'21: Constraints are an explicit part of the report, with multiple standards identified and discussed.
- Rania's 475 Spr'21: Constraints are an explicit part of the report, with multiple standards identified and discussed.
- Shwetak's 475 Aut'21: Heavy use of Bluetooth Low Energy. Indirect discussion.
- Rania's 475 Wi'22: Constraints are an explicit part of the report, with multiple standards identified and discussed.

Problems in area

- CSE: We benefit by having about 30% of our class offerings covered by CSE. BUT, harder to get compliance on ABET reports, etc. HOWEVER, MUCH better compliance this time.
- Staffing is a challenge – tons of students, few Tenure Track teaching cycles.
 - New Teaching Faculty hires will help.
- COVID: we are an equipment-heavy/lab-heavy area. Shipping kits was a struggle, but seems to work okay.
 - In person give-out/return
 - Rania's remote hardware setup.